WHAT IS CLAIMED:

1. A method of controlling a turbine/alternator comprising a gas driven turbine and permanent magnet alternator on a common shaft comprising:

providing electric power to said turbine/alternator through an inverter circuit to start said turbine/alternator to achieve self-sustained operation of said turbine/alternator; and

reconfiguring said inverter circuit to output electric power from said turbine/alternator when self-sustained operation of said turbine/alternator is achieved,

wherein current data of the electric power is sensed by a sensor during outputting electric power from said turbine/alternator.

2. The method of claim 1, wherein sensed current data of said sensor is used to provide current limit control.

3. The method of claim 1, wherein sensed current data of said sensor is used to provide power balancing control.

4. The method of claim 3, wherein said inverter circuit comprises an inverter, and said sensed data of said sensor is used to provide power balancing control of a three-phase output of said inverter.

5. The method of claim 1, wherein said sensor comprises a current transformer.

6. The method of claim 1, wherein during providing electric power to said turbine/alternator, controlled combustion of fuel and air is provided to said gas driven turbine of said turbine/alternator.

7. The method of claim 1, wherein when reconfiguring said inverter circuit, said inverter circuit is connected to said turbine/alternator through a rectifier.

8. The method of claim 1, wherein said inverter circuit comprises an output filter for filtering said electric power and said output filter is removed when providing electric power to said turbine/alternator through said inverter circuit.

9. An electric system for a turbine/alternator comprising a gas driven turbine and permanent magnet alternator on a common shaft comprising:

an inverter provided for operation of said turbine/alternator;

means to provide electric power to said turbine/alternator through said inverter to start said turbine/alternator to achieve self-sustained operation of said turbine/alternator;

means to reconfigure said inverter to output electric power from said permanent magnet turbine/alternator to supply the electric power to a load; and

a sensor for sensing output current of said turbine/alternator.

10. The electric system of claim 9, wherein sensed current data of said sensor is used to provide current limit control.

11. The electric system of claim 9, wherein sensed current data of said sensor is used to provide power balancing control.

12. The electric system of claim 11, wherein said sensed current data of said sensor is used to provide power balancing control of a three-phase output of the inverter.

13. The electric system of claim 9, wherein said sensor comprises a current transformer.

14. The electric system of claim 9, further comprising means to provide controlled combustion of fuel and air to said gas driven turbine to achieve self-sustained operation of said gas driven turbine.

15. The electric system of claim 9, wherein said means to reconfigure said inverter connects said inverter to said turbine/alternator through a rectifier.

16. The electric system of claim 9, wherein said load comprises a power line, said means to reconfigure said inverter to supply electric power to said power line at a common line voltage and frequency.

17. The electric system of claim 9, further comprising an output filter for filtering said electric power, which output filter is removable when said means to provide electric power provides electric power to said turbine/alternator.